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ABSTRACT

Highlights and major conclusions of the report, "Reading with Television: An Evaluation of the Electric Company" are summarized. One hundred public school classrooms in each of two sites--Fresno, Calif. and Youngstown, Ohio--were involved in the study. Half of the classrooms studied in each site were randomly assigned as viewing classes and the other half as nonviewing. An attempt was also made to evaluate the effects of viewing the program at home in Richmond, Va. and Washington, D.C. In-school viewing classes made significantly greater gains than nonviewing classes in the reading skills the program was designed to teach. The program had a clear and significant impact on its target audience--second grade children who were in the bottom half of their class as indicated by standardized reading test scores, indicating the program was an effective instructional supplement for children who were beginning to experience reading difficulty. The program was also effective on first grade classes that viewed in school. Significant impact was also seen on third and fourth grade classes. Gains were produced among first and second grade classes across almost all of the 19 major curriculum areas built into the program. Some positive effects on a standardized reading test were also found. Effects were similar on all groups--Spanish, blacks, whites, boys, and girls. Teachers also reacted favorably. (RC)

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A SUMMARY OF THE MAJOR FINDINGS FROM "READING WITH TELEVISION: AN EVALUATION OF THE ELECTRIC COMPANY"

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A report by:

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Princeton, New Jersey

March, 1973

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The Electric Company, second of the educational ventures of Children's Television Workshop, was telecast daily for one-half hour by more than 220 stations, nearly all non-commercial, in the United States during an inaugural season beginning October 25, 1971, and ending April 21, 1972. The program's first year was funded by the United States Office of Education, The Ford Foundation, Carnegie Corporation, The Corporation for Public Broadcasting, and the Mobil Oil Corporation.

Summary prepared by James J. Morisseau

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BACKGROUND

The Electric Company represents the first large-scale experiment in the use of television in teaching reading skills to young children. As such, there was a need to evaluate the program to determine whether the 26-week series was effective in meeting the goals set for it by Children's Television Workshop (CTW) and its educational advisors.

To meet the need, CTW circulated a request for proposals for the evaluation of the first year of The Electric Company, its content, and its approach. The contract was awarded to Educational Testing Service (ETS) -- a non-profit educational measurement and research organization in Princeton, New Jersey. ETS has conducted evaluations of the first two years of the CTW-produced Sesame Street.

Among the questions ETS explored were:

--What are the program's effects on first through fourth grade classes who view The Electric Company in school?

--What are the effects of viewing The Electric Company in school on its main target audience -- that segment of second, third, and fourth graders who are experiencing reading difficulties?

--What are the program's effects on similar groups of children who view at home rather than in school?

--Does frequency of viewing affect the program's impact on at-home viewers?

--What are the effects of the program in each of the 19 main curriculum areas for the show's first season?

--What are the program's effects on viewers of Spanish background, on blacks and on whites, and on boys and on girls?

--Is the program more effective when seen in color rather than in black and white?

--Does the program affect the attitudes of children toward reading or school?

--Does the program affect the attitudes of teachers or parents toward the children and their reading performance? What are the attitudes of teachers toward the program?

ETS has published its findings in a report entitled READING WITH TELEVISION: AN EVALUATION OF THE ELECTRIC COMPANY.* The following is a summary of some of the highlights and major conclusions of the full report.

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* Copies of the full text of the final two-volume report are available from the Educational Resources Information Center (ERIC), Document Reproduction Service. TM 002433 and 34

MAJOR POSITIVE FINDINGS

Television can be an effective classroom tool in helping first through fourth graders learn to read.

The ETS study clearly indicates that as a result of watching The Electric Company in school during the 1971-72 inaugural broadcast year, viewing classes made significantly greater gains that non-viewing classes in the reading skills the program was designed to teach. The program had a clear and significant impact on its primary target audience -- second grade children who were in the bottom half of their class as indicated by standardized reading test scores -- indicating the program was an effective instructional supplement for children who were beginning to experience reading difficulty.

- The program, according to the ETS findings, also was successful on first-grade classes that viewed in school. The first graders were not among the primary target audience for whom the program originally was designed.

- The program had a significant impact on third and fourth grade classes that viewed in school, although the effect was somewhat less than in the lower grades.

- The program was successful in producing gains among first and second grade classes across almost all of the 19 major curriculum areas built into the program and tested in the ETS study. Some positive effects on a standardized reading test was also found.

- The program had a similar effect on all groups who viewed in school -- Spanish background, blacks, whites, boys, and girls.

- The program won a generally favorable reaction from teachers who found it useful in teaching and reviewing certain reading skills.

THE PROGRAM

The Electric Company is built around a specific set of curriculum goals developed by CTW's educational advisors and its research and production personnel. The goals are premised on the need to give children some tools required for "decoding," the process of extracting meaning from written messages.

Specific goals for the first season included 19 curriculum areas grouped under such categories as consonants, vowels, and consonant "blends" (for example, "bl," "dr," "st"); letter groups or "chunks" (like "ai," "ch," "ar"); scanning for structure (for example, recognizing that a final "e" changes the sound of a word); and reading for meaning.

The 130 half-hour programs were telecast daily from the end of October to the end of April. The curriculum provides a "cafeteria" of

instructional approaches to teaching basic reading skills. This is made possible through a segmented and varied format of short, varied components, including live performances, some film, and cartoon animation.

The Electric Company in its first season was aimed at second, third and fourth graders, with a main target audience of second graders who score in the lower half of their grade on standard reading achievement tests, and on third and fourth grade pupils scoring in the lowest quarter of their grades on the standardized tests.

THE SAMPLES

The evaluation of the effects of viewing The Electric Company in school involved 100 public school classrooms in each of two sites--Fresno, California, and Youngstown, Ohio. Half of the classrooms studied in each site were randomly assigned as viewing classes and the other half as non-viewing.

The sites were selected on two criteria. The first was control of viewing conditions. In both locations, children from designated non-viewing classes were not able to view the program. In Fresno, the program was telecast to viewing classes only over the county school system's closed circuit network. In Youngstown, there was no educational television station and the program was telecast to viewing classes only over a commerical outlet. In neither site was the show telecast after school hours.

The second criterion was demographic variety. Fresno County, a largely rural area, offered the opportunity to test the program's impact on rural children and, at the same time, on children of Spanish background (comprising about 50 percent of the Fresno sample). Youngstown provided an opportunity to examine effects on urban youngsters (50 percent of the sample was black).

An attempt was made to evaluate the effects of viewing The Electric Company at home in Richmond, Va., and Washington, D.C. The 200 predominantly black classes sampled were designated as either encouraged or not-encouraged to view the program at home during after-school hours. These two sites were selected because it was thought that control groups could be maintained in these UHF (ultra high frequency) areas.

In all, the total sample included 8,363 first through fourth grade children in some 400 classes. It should be noted that the children viewed or were encouraged to view in class units, so that most of the results of the tests were based on class performance and not on the performance of individual pupils.

THE TESTS

The ETS study of The Electric Company involved a battery of tests

administered to classes both prior to and following the broadcast season. The key element was a 123-question test, "The Electric Battery," designed to assess children's performance on the program's curriculum objectives rather than their general reading performance. "The Electric Battery" included 19 subtests under the 4 major curriculum goal areas: blending letter sounds, chunking groups of letters, scanning for structure and reading for meaning. The questions in "The Electric Battery" sampled skills associated with each of the goal areas.

First grade children, having little previous formal reading instruction behind them, were given a shorter, 24-question version of the battery at pretest.

The battery also included assessments of children's attitudes toward reading and toward school and their preferences in subject matter. A random 20 percent of all children also received a 42-question, individually administered test which assessed their abilities to read aloud certain sounds, words, and word groups.

In addition, questionnaires were employed with both teachers and parents to evaluate the program's impact on such areas as parent, teacher, and pupil attitudes. All viewing and encouraged classes were observed during regular reading instruction in an effort to relate classroom reading instruction and reading preformance.

Finally, a section of the standardized Metropolitan Achievement Test was administered to each grade level before the broadcast season to identify target children and after the season to measure gains in general reading ability. In Richmond and Washington, measures of amount of viewing of The Electric Company were also part of the evaluation.

THE RESULTS

The evaluation of The Electric Company was essentially a matter of determining whether classes that viewed made greater gains in certain reading skills than classes that did not view. The Electric Company audience is made up of school-aged children, all of whom can be assumed to be gaining from their school experience in the same areas that make up the program's objectives. The evaluation is thus a determination of whether classes that watched made gains over and above those achieved through regular classroom instruction.

The In-School Viewing Study

The ETS study, as noted earlier, clearly indicated that The Electric Company was successful in achieveing its major goals, particularly with target readers in second grade and with first-grade classes that viewed in school. The series benefited children at different levels of reading

achievement and in first and second grades this benefit included improvement in almost all of the 19 main curriculum areas. The series also benefited third and fourth grade classes, but to a lesser extent than in the lower grades.

On the 123-question battery, the advantage from viewing was found to be significant in every grade. First grade viewing classes had an estimated 5.5 point advantage at posttest over non-viewing classes in Fresno; in Youngstown, the estimated advantage from viewing was 10.2 points. In second grade viewing classes, the estimated advantage was 5.8 points in Fresno and 2.2 points in Youngstown. In third grade, the estimated gain was 2.4 point in both sites and in fourth grade it was just over 1 point.

The smaller gains in the higher grades may have been the result of a "ceiling effect" -- that is, many of the children at pretest already had mastered many of the skills assessed in the battery. Therefore, these children had little to gain on this test battery: third and fourth grade classes at pretest averaged scores of 94 and 106, respectively, on the 123 questions. It may be that the test were too limited in difficulty and that a more challenging test instrument would have produced evidence of greater gains. Another possibility is that some poorer readers in the third and fourth grades, with a history of reading difficulty, already had developed negative attitudes toward reading and toward school and thus had difficulty benefiting from the program.

The study indicated that viewing classes in first and second grades made significant gains across almost the full spectrum of the program's curriculum goals. Examination of the scores on items designed to test achievement in the program's sub-goals (Page 12) indicates that the overall scores were the results of gains in almost all of the goal areas.

The two most striking examples were among second grade target viewers in Fresno, who scored significantly more than non-viewers in 17 of the 19 subtest areas, and among first grade viewers in Youngstown, who scored significantly more than their non-viewing counterparts in 18 of the areas. (Page 14).

Looked at another way, within the target second grade test group in Fresno, the viewers gained an additional 2.5 percent to 19.0 percent more than non-viewers. The average percentage advantage among viewers was 8.7 percent. (Page 9).

In addition, a significant gain was made on a standardized reading test by viewing classes in Youngstown first grade and in Fresno fourth grade.

Also important was a finding in the ETS study that gains due to viewing occurred whether time for viewing was normally taken from or added to regular reading instruction. Gains were about equal in

classes where The Electric Company was viewed during time normally devoted to reading instruction and in classes viewing during the time normally devoted to instruction in other subject matters.

The effects of viewing the program in school appeared to be similar for all groups of children, regardless of ethnic background or sex. Similar gains were registered for girls and boys, blacks and whites, and children from Spanish-speaking and English-speaking backgrounds.

And a number of additional findings were noted.

Teachers in general and first-grade teachers in particular reported favorable attitudes toward the program.

At the first-grade level, parents of viewing children regarded their children as better readers than did parents of non-viewing children. (Similar reactions were not found at the higher grade levels and no other parental attitude changes were noted.) The attitudes of children toward school and reading did not seem to be affected by the program.

No difference in achievement was found between children who viewed the program in school in color and those who viewed it in black and white. The study did not measure motivational aspects of viewing in color vs. black and white.

The At-Home Viewing Study

The evaluation of the effects of viewing The Electric Company at home did not provide conclusive results. In both Washington and Richmond, children in classes that were not encouraged to view at home viewed on their own almost as much as children in encouraged classes. Since amount of viewing between the two groups was not very different, it is not surprising that gains were also quite similar.

Attempts to see if the amount that children viewed at home had any affect upon scores turned up no systematic differences among children of differing levels of viewing. One possible conclusion is that amount of viewing the show at home did not influence scores. An alternative possibility is that the measures used were not precise enough to accurately assess amount of viewing.

FOLLOW-UP STUDIES

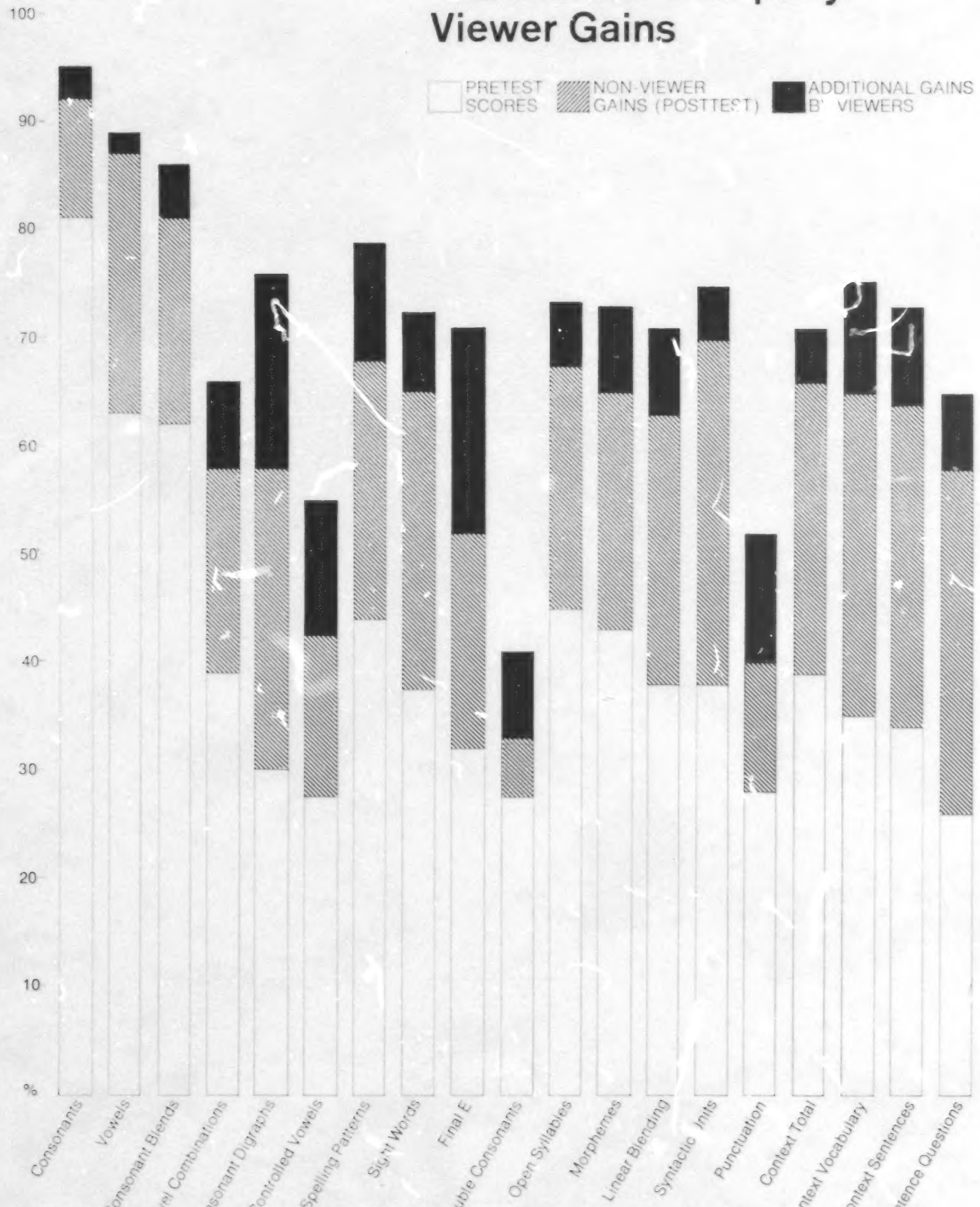
To evaluate an experimental educational effort adequately is a long-term project. The first year findings indicate that the in-school viewing of the program was successful in meeting its immediate goals. The final "report card" will not be in until follow-up studies can be made of the target audience to determine whether the program has a lasting impact on their reading ability.

As an example, it was not possible in a first year study to determine whether the program has the desired effect of preventing reading failure among first and second-grade pupils. Nor was it possible to explore such questions as whether the failure of older children can be reversed.

Accordingly, CTW has commissioned ETS to undertake a second-year study of The Electric Company, following second and third grade classes in Fresno and Youngstown that last year were first and second grade classes. Included will be children who were in non-viewing classes last year but who are in viewing classes this year -- and vice versa -- as well as children who were not included in the first-year study. The new study will make it possible to evaluate the impact of two years of viewing and one year of viewing and to further look at the program's influence on viewers' attitudes toward school and reading.

According to findings by the Educational Testing Service, second grade target viewers in Fresno, California, scored significantly higher than non-viewers in 17 of the 19 subtest areas and slightly higher than non-viewers in the other 2 areas in the evaluation of the television series. Chart illustrates additional percentage gain made by the target viewers in the subtests, which correspond to the 19 curriculum goals of the first season. Across the range of subtests, viewers gained from 2.5 percent to 19 percent more than non-viewers on the questions passed after pretest, and the average advantage among viewers was 8.7 percent. The chart shows percentage of each subtest answered correctly at pretest, the percentage of gains made by non-viewers during the study, and the additional gains made by viewers. "Target" students are those who at pretest scored in the lower half of a nationally normed reading test. The Fresno viewers were among 8,363 grade school pupils who were tested by ETS before the series began and again at the end of the 130 daily, half-hour programs that made up the first broadcast season.

The Electric Company: Viewer Gains



Excerpts From 'The Electric Battery'

The Educational Testing Service's evaluation study of the new TV series "The Electric Company," produced these posttest averages from sets of viewers and non-viewers of the program.

TEST		First Grade				Second Grade			
		Fresno		Youngstown		Fresno		Youngstown	
		Viewers	Non-Viewers	Viewers	Non-Viewers	Viewers	Non-Viewers	Viewers	Non-Viewers
Consonant Digraphs									
	ph	**48%**	28%	**60%**	17%	**83%**	46%	**95%**	61%
	ch	62	**63**	**68**	55	**92**	82	**92**	87
	th	**69**	63	**66**	52	**81**	67	**83**	82
	wa**sh**	**60**	53	**69**	58	**90**	82	**92**	87
	shake	**48**	34	**38**	24	**72**	48	**67**	57
	chew	**46**	37	**57**	38	**77**	59	**85**	76
Larger Spelling Patterns									
	t**all**	**64**	60	**77**	59	**86**	78	**89**	83
	h**igh**	**60**	58	**58**	39	**85**	75	**85**	82
	b**all**	75	**81**	**89**	83	**91**	83	**95**	90
	t**alk**	**57**	51	**69**	43	**86**	70	**88**	83
	w**ing**	**49**	40	**51**	39	**74**	60	**75**	68
Final E									
	mat**e**	**43**	38	**47**	29	**75**	61	**82**	75
	not**e**	**55**	51	**61**	43	**80**	71	**86**	81
	con**e**	**48**	37	**50**	37	**74**	56	**72**	63
	kit**e**	**75**	61	**71**	56	**91**	72	**90**	85
	rob**e**	**34**	20	**33**	12	**50**	27	**50**	31
	tir**e**	**55**	50	**53**	42	**80**	62	**76**	68
Morphemes									
	est	**92**	91	**91**	89	**99**	96	99	99
	ing	68	**75**	**84**	73	**94**	91	98	98
	er	41	**47**	**55**	36	**78**	62	78	74
	's (poss.)	29	**38**	**33**	24	**54**	39	**48**	35
	ed	**45**	44	**59**	38	81	**90**	**84**	82
	ing	70	**78**	**85**	78	**94**	90	97	97
	n't	53	**59**	**70**	54	**83**	66	**87**	84
	n't	44	44	**60**	37	**74**	58	**83**	77
	's (is)	29	29	**27**	25	**30**	35	**29**	24
	s (plural)	**56**	52	**70**	62	**82**	74	**99**	88

YOUNG VIEWERS OF "THE ELECTRIC COMPANY" registered more mastery of certain key reading skills than their non-viewing counterparts in nearly all of the 123-item battery of tests which Educational Testing Service researchers dubbed "The Electric Battery." The tests were administered before and after the first season of programs to 8,363 children in several parts of the country. These figures represent percentages of children who correctly answered test questions and indicate which group of children, all of whom started the year at the same general achievement level, were farther along in mastering each skill by the end of the year. Both viewers and non-viewers continued to receive regular classroom reading instruction during the season. The over all survey indicates that The Electric Company was effective in teaching areas which are difficult for many beginning readers. Group with higher average is indicated in bold face.

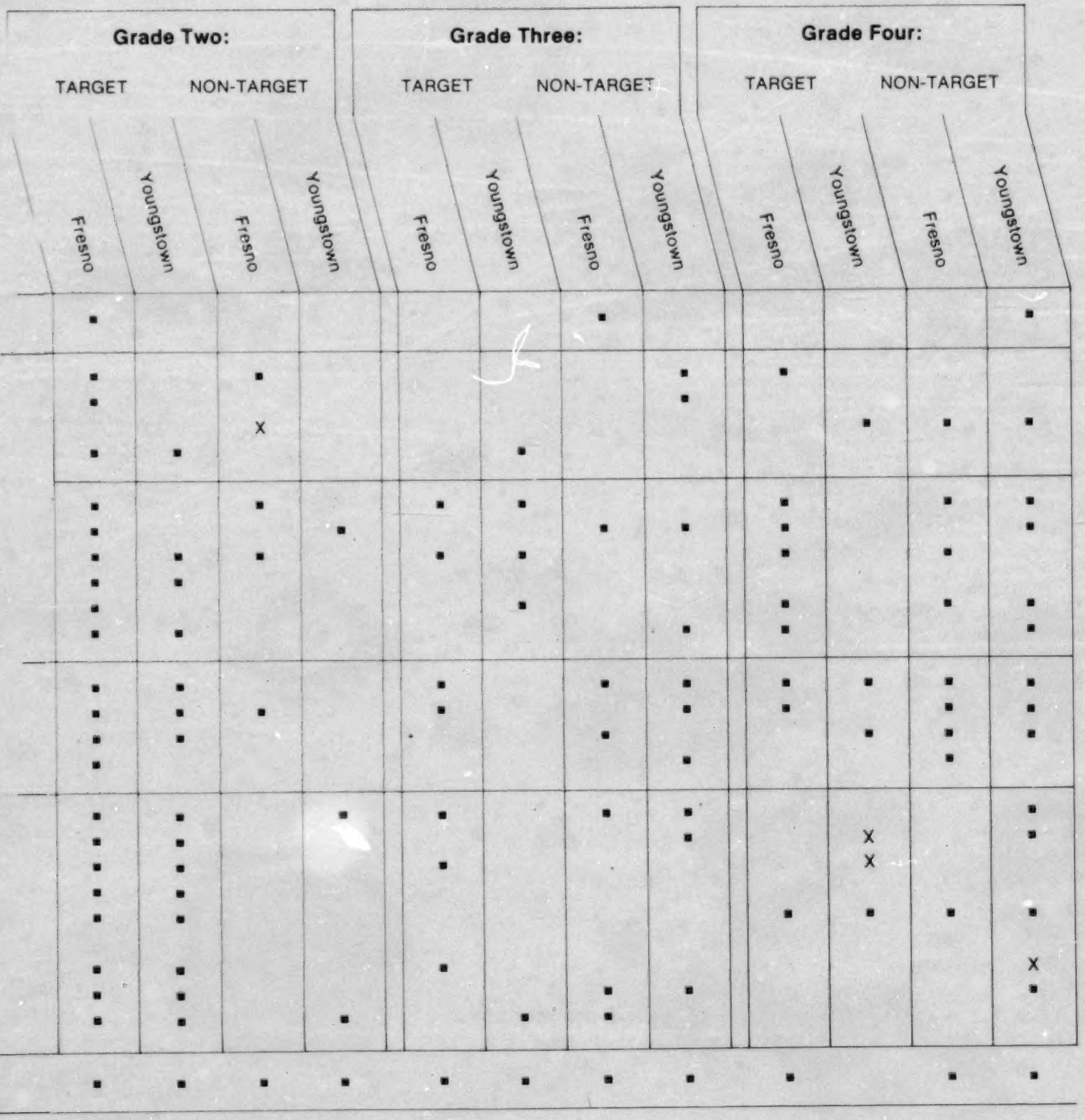
TEST	First Grade				Second Grade			
	Fresno		Youngstown		Fresno		Youngstown	
	Viewers	Non-Viewers	Viewers	Non-Viewers	Viewers	Non-Viewers	Viewers	Non-Viewers
Linear Blending								
He swings the bat.	**63%**	57%	**67%**	61%	**86%**	78%	**90%**	84%
She is wearing a skirt.	**65**	51	**68**	46	**81**	68	**85**	77
The car is white.	72	72	**78**	68	**91**	86	**96**	95
He is cleaning the horse.	**41**	36	**56**	43	**67**	50	**72**	67
The book is on the seat.	60	**63**	**81**	70	**90**	87	**95**	94
The waiter drops a dish.	**35**	24	**36**	23	**60**	48	**67**	56
Choosing by Parts of Speech								
noun	**68**	65	**79**	73	**85**	78	**91**	86
preposition	**44**	37	**52**	33	**74**	54	**87**	73
verb	49	**51**	**77**	59	**85**	79	**93**	88
preposition	**43**	38	**64**	42	**79**	66	**83**	77
adjective	51	**52**	**68**	54	**78**	74	**84**	76
verb phrase	67	**69**	**76**	59	**95**	87	**97**	92
adjective	58	**63**	**76**	63	**87**	77	**91**	87
Punctuation								
cap & period	37	**42**	**45**	27	**76**	56	**68**	64
quotes	**49**	36	**66**	43	**66**	53	**75**	53
period, exclamation	**38**	28	**50**	34	**64**	37	**69**	48
commas	**26**	22	**35**	25	**35**	29	**45**	32
cap, question mark	26	**28**	**37**	29	**50**	43	**62**	54
Sight Words								
basketball	53	**64**	**70**	54	**86**	78	**94**	93
hippopotamus	**50**	37	**57**	35	**84**	67	**86**	73
refrigerator	**47**	44	**57**	39	**68**	59	**75**	68
helicopter	58	**60**	**67**	49	**82**	77	**85**	79
Sight Words in Sentences								
tricycle	**62**	61	**70**	51	**88**	79	**94**	90
refrigerator	53	**55**	**63**	50	**84**	69	**84**	83
hippopotamus	**56**	53	**58**	42	**82**	69	**87**	77
helicopter	**59**	55	**63**	47	**85**	73	**92**	84
basketball	69	**70**	**84**	74	**94**	89	**98**	96
Answering Questions About Sentences								
bus	**62**	52	**69**	54	**80**	75	**86**	80
animal	**42**	39	**59**	46	**79**	67	**86**	78
large	**31**	27	**43**	28	**62**	56	**77**	66
two	49	**52**	**59**	36	**81**	68	**87**	80
a ball	**50**	45	**58**	43	**76**	67	**80**	75
his father	39	**47**	**59**	38	**79**	65	**90**	83
a fish	**39**	36	**44**	32	**72**	60	**80**	69
a glass	**38**	31	**47**	29	**66**	55	**76**	64

How Electric Company Viewers Fared: Pattern of Achievement

Chart, based on findings by Educational Testing Service, details areas where viewing classes scored significantly higher than non-viewing classes in Fresno, Calif., and Youngstown, Ohio. Included in the second grade study were "target" students who saw the show regularly and scored in the lower half according to national reading norms, and "non-target" students reading at or above grade level. Third and fourth grade "target" students were those scoring in the lowest quarter, again using the national norms.

A definite pattern favoring viewers emerges in the 123-question test covering the 29 curriculum areas included in the experimental series' first season. Greatest gains were made by second graders who were rated as poor readers, and by first grade classes. All four grades showed some progress as a result of viewing the show. Where differences are not considered significant, the grid is left blank meaning the probability of differences happening by chance alone is more than 10 percent. ETS tested 8,363 grade schoolers before the series began and again at the end of the 130 daily, half-hour programs that made up the first broadcast season.

TEST AND SUBTESTS	Number of Items	Grade One: (All Target) TOTAL Fresno	Grade One: (All Target) TOTAL Youngstown
Matching Words	8		■
Blending Total	28	■	■
Consonants	13	■	■
Vowels	6	■	■
Consonant Blends	9		■
Chunking Total	28	■	■
Vowel Combinations	9	■	■
Consonant Digraphs	6	■	■
Controlled Vowels	4		
Larger Spelling Patterns	5	■	■
Sight Words	4		■
Scanning Total	14	■	■
Final E	6	■	■
Double Consonants	4		■
Open Syllables	4		■
Reading for Meaning Total	45	■	■
Morphemes	10		■
Linear Blending	6	■	■
Syntactic Units	7		■
Punctuation	5	■	■
Context Total	9		■
Context Vocabulary	4	■	■
Context Sentences	4	■	■
Sentence Questions	8		■
Grand Total	123	■	■



In all boxes where squares appear, there is a 90 out of 100 or better chance that the differences favoring the show's viewers occurred as a result of their watching The Electric Company rather than by chance. Blank boxes on the grid indicate areas where differences are not considered significant. (The several X marks on the grid indicate where differences favored non-viewers.)

Impact of The Electric Company On Beginning Readers

How viewers and non-viewers of the experimental TV series fared is indicated by these results from individually administered tests conducted by Educational Testing Service at the close of the program's first season.

	First Grade				Second Grade			
	Fresno		Youngstown		Fresno		Youngstown	
	Viewers	Non-Viewers	Viewers	Non-Viewers	Viewers	Non-Viewers	Viewers	Non-Viewers
Sounds in Words								
l	69%	69%	77%	65%	**98%**	95%	**99%**	94%
o	**65**	50	**57**	31	**90**	80	**92**	85
t	**70**	59	**76**	63	**94**	82	**96**	90
ay	53	**57**	**57**	37	**94**	81	**95**	85
r	69	69	**84**	56	**98**	82	**100**	93
a	59	**62**	**61**	43	**93**	74	**95**	81
ch	**51**	39	**70**	37	**83**	59	**90**	84
pl	**80**	79	**95**	83	100	100	98	**100**
y	63	**65**	**67**	49	**100**	93	**98**	93
st	**65**	54	**37**	21	**78**	68	**82**	69
lp	69	**76**	88	**91**	**96**	88	98	98
oi	11	**12**	11	4	**50**	46	**53**	37
Sounds in Nonsense Words								
l	**70**	65	**81**	52	**95**	86	**94**	92
i	**62**	59	**66**	39	**86**	64	**77**	74
oy	**53**	44	**70**	45	73	**75**	**83**	71
ing	**53**	41	**50**	18	**74**	71	**75**	57
sk	**69**	53	**40**	17	**85**	71	**71**	58
e	27	27	**22**	4	**41**	33	**42**	21
oi	**16**	14	**11**	4	**55**	49	**51**	39
th	**62**	51	**59**	39	**80**	64	**80**	69
ern	**33**	28	30	**39**	**53**	51	**58**	39
a	**32**	16	**24**	14	**62**	36	**41**	24
i	**33**	24	**29**	2	**64**	50	**59**	46
ight	**29**	16	**32**	13	**62**	46	**76**	59
sh	**62**	55	**47**	31	**95**	72	**81**	66
ar	**43**	36	**27**	13	**64**	44	**63**	44
nk	**50**	38	**33**	17	**70**	57	**66**	58
a	**36**	16	**43**	36	**52**	38	**60**	59
Reading Words in Sentences								
He	**84**	83	**89**	71	**98**	94	**98**	97
went	54	**61**	**84**	56	**96**	92	**96**	93
home	**82**	69	**90**	64	**98**	96	**100**	97
correct order	**62**	57	**93**	91	**86**	80	**100**	98
The	91	**93**	**95**	81	100	100	100	100
little	80	**93**	**95**	83	100	100	**99**	97
toy	**65**	57	**84**	67	91	**94**	**99**	94
is	**91**	88	**95**	84	99	**100**	**100**	98
mine	**35**	21	**40**	15	**69**	57	**78**	60
correct order	64	**65**	**97**	90	**83**	77	**100**	99
Scrambled Sentences								
walks town the she to	27	**37**	**40**	19	**71**	51	**80**	62
big I am	**70**	64	**91**	84	**96**	88	98	**99**
boy tall is the	**52**	45	**67**	27	**86**	64	**93**	78
sees red he house a	**27**	20	**36**	19	**70**	48	**72**	58

INDIVIDUALLY TESTED VIEWERS OF "The Electric Company" consistently outpaced their non-viewing classmates in tests of skill areas treated by the experimental series which is designed to help teach beginning readers. All students in the test groups in Fresno, Calif. and Youngstown, Ohio, continued with their regular classroom reading instruction, but some also watched the TV series while others did not. These tests, administered to a random 20 percent of grade schoolers in the study, provide an assessment of the child's ability to apply what he or she has learned because they require an overt reading response which virtually rules out guessing. The figures report the average percentage of children in each group who correctly answered test items at the end of the first broadcast season and are not test scores. In other words, these figures gauge which groups of children, all of whom started the year at the same general reading level, are farther along in mastering each skill. Group with higher percentage is indicated in bold face.